

REMARKS

In response to the Office Action dated July 29, 2005, claims 1, 2, 6-8 are amended, claim 10 is canceled. No new matter has been added by way of the amendments. Reexamination and reconsideration of the claims as requested is respectfully requested.

In paragraph 2 on page 2 of the Office Action, the Examiner objects the abstract of the disclosure because the specification employs the use of reference numbers [1], [2], and [3] within the text of the specification to refer to the citations of the bibliography. Applicant refers the examiner to the amendment filed on February 1, 2005, a copy of which is attached hereto, wherein the specification and Abstract were amended to reflect these corrections. However, in the interest of clarifying the specification, Applicant submits amendments to the specification. Applicant respectfully requests the Examiner withdraw the objection.

In paragraph 4 on page 2 of the Office Action, the Examiner rejects claims 1-2 and 6-10 under 35 U.S.C. 112, first paragraph as based on a disclosure that is not enabling. Applicant traverses this rejection.

Applicant submits replacement paragraphs wherein patents describing the trademarked Flow-Thru Chip patents are incorporated by reference. Applicant believes however that sufficient structural description of analysis chips as claimed is found in the specification as originally filed, and subsequently amended on March 30, 2004. Moreover, the Flow-Thru Chip is referred to by Applicant as an exemplary embodiment only and therefore Applicant is fully entitled to any equivalent structures within the

meaning of its claims. Applicant respectfully directs the Examiner to, e.g., page 2, line 13 to page 3, line 6; page 4, lines 9-14 and 19-23; page 8, line 20 to page 9, line 5; page 9, line 23 to page 10, line 2. The structural features described therein enable each claim limitation involving the analysis chip claim element.

Applicant respectfully requests the Examiner withdraw the rejection of claims 1-2 and 6-10 under 35 U.S.C. 112, first paragraph.

In paragraph 2 on page 3 of the Office Action, claims 1, 7, 8 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicant respectfully traverses this rejection.

Applicant has amended claims 1, 7 and 8 to overcome the rejection.

Applicant respectfully requests the Examiner withdraw the rejection of claims 1, 7 and 8 under 35 U.S.C. 112, second paragraph.

In paragraph 6 on page 6 of the Office Action, the Examiner rejects claims 1, 6-8 and 10 under 35 U.S.C. 103(a) over Kenny (US 4,461,326) in view of Kopaciewicz (US 6,830,717). Applicant respectfully traverses the rejection.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142.

Claim 1, as amended, comprises, *inter alia*, an apparatus for aspirating and dispensing liquid analytes, comprising a microtitre plate with a plurality of wells holding an analyte therein; a plurality of pipettes corresponding to each well, by which an analyte can be withdrawn from the corresponding wells; a plurality of analysis chips arranged in an intermediate plate for analyzing the analyte wherein the analyte is transferred through the liquid channels of the analysis chip, wherein a proportion of a surface area of the liquid channels of the analysis chips contacts the analyte. The surface area of the liquid channels of the analysis chips is constructed to allow biological material for binding molecules contained in the analyte to be fixed thereon.

Kenny discloses a pipette device comprising one or more pipette tubes. The device may be adapted to connect with a manifold for alternatingly applying a vacuum and pressure to the pipette tubes. The pipette device has a pipette tray with a plurality of conically shaped pipette tubes adapted to register with wells, e.g., culture wells, in a conventional well tray. The upper end of each tube is integral with a substantially rigid plate.

In contrast with Applicant's claim 1, Kenny fails to disclose each pipette tube as comprising an analysis chip arranged in an intermediate plate for analyzing macromolecular biopolymers, wherein the analysis chips are coated with biological material for binding molecules contained in the analyte.

Thus, Kenny fails to include each limitation of claim 1 and, therefore, fails to render claim 1 obvious under 35 U.S.C. 103(a).

Kopaciewicz fails to cure Kenny's failings in this regard. Kopaciewicz discloses composite structures comprising particles entrapped within a porous polymeric

substrate and cast in place into a housing, e.g., a pipette tip. In this manner, a platform for micromass handling is disclosed. For example, silica particles are entrapped in a polysulfone matrix for isolating DNA, wherein the polysulfone matrix serves as a support network enmeshing the silica particles.

Kopaciewicz simply fails to disclose an analysis chip wherein the biological material for binding molecules is fixed on the surface area of the analysis chip for analyzing the molecules.

Under Applicant's claim 1, identifying specific macromolecular biopolymers in a solution comprising a plurality of different macromolecules is realized such that capture molecules fixed on the surface of the analysis chip hybridize the macromolecules to be analyzed.

But according to Kopaciewicz, the molecules to be isolated are bound to silica particles that are received by the above-mentioned polymeric substrate. These silica particles bind many different types of molecules that must be separated in a subsequent step, making the analyzing process far more complex than that disclosed and claimed by Applicant.

Further, the analysis chips of inventive claim 1 are completely arranged in an intermediate plate. Thus, removing or changing a plurality of analysis chips can be readily performed in a short period of time by removing or exchanging the whole intermediate plate from the pipette apparatus.

But under Kopaciewicz, the polymeric substrate is cast in every single pipette tip or it is filled in a well of an underdrain subassembly (see Col 6, line 58-63), making it a

complicated task to remove the cast in place polymeric substrate from each pipette tip or from all the wells of an underdrain subassembly.

Thus, neither Kenny nor Kopaciewicz, nor the combination thereof, teach or suggest the arrangement of Applicant's independent claim 1.

Applicant respectfully requests the Examiner withdraw the rejection of claim 1 under 35 U.S.C. 103(a) over Kenny in view of Kopaciewicz.

Dependent claims 6-8 and 10 are also rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Kenny in view of Kopaciewicz. While Applicant does not acquiesce with the particular rejections to these dependent claims, these dependent claims include all of the limitations of claim 1 and any intervening claims, and recite additional features that further distinguish these claims from the combination of Kenny and Kopaciewicz. Therefore, dependent claims 6-8 and 10 are also in condition for allowance.

Applicant respectfully requests the Examiner withdraw the rejection of claims 6-8 and 10 under 35 U.S.C. 103(a) over Kenny in view of Kopaciewicz.

CONCLUSION

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicant respectfully requests favorable reconsideration and early allowance of all pending claims.


If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Jeffrey R. Stone at 952 253-4130.

Respectfully submitted,

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